Eastern Bering Sea 2018 Report Card

- The eastern Bering Sea was characterized by anomalously warm conditions in 2018. The PDO was slightly positive with a decline to near zero in summer 2018. ~70% chance of El Niño conditions are predicted for the winter of 2018-2019. The North Pacific Index was strongly positive from fall 2017 into 2018.

- The northern Bering Sea experienced an unprecedented near-complete lack of sea ice in 2018; the southern Bering Sea had no sea ice and no cold pool.

- Acoustic estimates of euphausiid density increased slightly in summer 2018 from 2016, but remains relatively low. The 2018 value is similar to what was observed in 2004.

- The biomass of benthic foragers dropped in 2018 (2nd lowest value in the timeseries). The decline was due to Yellowfin sole (31%) and Northern rock sole (19%). Northern rock sole have declined steadily since 2010.

- The biomass of motile epifauna remains above the long-term mean, with an increasing trend in the past 4 years. Urchins, sand dollars, and cucumbers are above their long-term mean, with a 29% increase from 2017–2018. Opilio crab increased 100% while King crab decreased 29% from 2017–2018.

- The biomass of pelagic foragers remains below its mean in 2018. Similar to 2017, a large increase in Pacific herring (80%) was off-set by a decrease in Capelin (91%). Jellyfish increased 204% and Atka mackerel increased 710%. Pollock have decreased 59% since 2014, with a 38% decrease from 2017 to 2018.

- The biomass of fish apex predators remains at its mean, but has been trending downwards since 2014. This decline is driven by a 54% reduction in Pacific cod biomass (19% decline from 2017 to 2018). Sablefish have increased since 2014 with a 173% increase from 2017 to 2018. Arrowtooth flounder biomass increased 23% from 2017 to 2018.

- The multivariate seabird breeding index remains below the long-term mean, indicating that overall, seabirds bred later and had poor reproductive success in 2018. Some murres did well reproductively, but the number of birds breeding was low and many were late in their reproductive efforts. This pattern may reflect a mismatch in timing of breeding and prey availability and/or that only high-quality breeders attempted to nest this year.

- Northern fur seal pup production at St. Paul Island in 2018 is approximately 6% less than the 2016 estimate. Pup production has been declining at St. Paul Island at an approximate annual rate of 4.0% since 1998.

- Seafloor habitat disturbance due to fishing gear (pelagic and non-pelagic trawl, longline, and pot) shows interactions have remained below the long-term average since 2011.
Figure 1: Eastern Bering Sea ecosystem assessment indicators; see text for descriptions.
* indicates time series updated in 2018.